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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Administration
Bureau of Agricultural and Industrial Chemistry

QUARTERLY

NAVAL STORES REPORT

on

Production, Distribution, Consumption and Stocks

of

TURPENTINE AND ROSIN

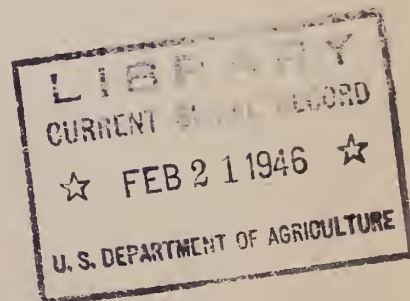
of the

UNITED STATES

By Crop Years

Covering Quarter - October 1 - December 31, 1945

Issued February 12, 1946



Compiled by

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Naval Stores Research Division

FOREWORD

In addition to its regular Annual and Semi-Annual Naval Stores Reports on production, consumption, and stocks of naval stores, the Naval Stores Research Division has, at the request of some of the War Agencies, undertaken the issuance of quarterly reports. These reports are issued under Federal Act 278, authorizing and directing the Secretary of Agriculture to collect, compile, and publish statistics and essential information relating to spirits of turpentine and rosin produced, held, and used in the domestic and foreign commerce of the United States.

If production figures for this period are used as a basis for estimating this crop year's probable production, the fact that gum naval stores production is seasonal should be borne in mind. Wood naval stores production, on the other hand, is not seasonal but is based largely upon probable consumer demand.

As in previous reports, carryover (stocks) of turpentine and rosin is separated into gum and wood products. Stocks of wood rosin do not include so-called "B wood rosin." While sulphate wood turpentine is carried in the regular production and carryover tables, data on tall oil ("liquid rosin") are in a table separate from gum and wood rosin. Pending the selection of a proper term, we continue to refer to the mixture of rosin and fatty acids recovered by the acidification of the soap curds (black liquor soap) obtained in the production of sulphate pulp as tall oil. The tall oil so obtained contains approximately 42 percent of resin acids.

The data on production, consumption, and stocks are expressed in commercial units: For turpentine - barrels of 50 gage gallons; and for rosin - drums of approximately 520 pounds net weight. A unit of naval stores consists of one barrel of turpentine and two and two-thirds drums of rosin. Carryover figures do not include gum turpentine or rosin producible from crude gum on hand.

Statistics on exports and imports of turpentine and rosin are now available and are included in this report.

These reports are designed to be of use to the industry -- producer, factor, distributor, and consumer. Every effort is made to obtain complete and accurate information but the completeness, accuracy, and promptness of issue depend upon the cooperation of those reporting. In accepting the statistics given in this report, as well as those in previous reports, it should be borne in mind that the Bureau of Agricultural and Industrial Chemistry merely assembles the figures from the individual reports received and is not responsible for their accuracy.

The Bureau of Agricultural and Industrial Chemistry extends its thanks to those producers, factors, distributors, and consumers who have so kindly cooperated in furnishing the requested information. The assistance of Mrs. Clotilde H. Oubre in tabulating the data for this report is gratefully acknowledged.

SUMMARY OF TURPENTINE

SUPPLY, DISTRIBUTION AND CARRYOVER (Bbls. - 50 gals.)
(By naval stores crop years, beginning April 1 and ending March 31)

<u>1945-46</u>			<u>1944-45</u>		
<u>3 mos. (Oct. - Dec.)</u>			<u>3 mos. (Oct. - Dec.)</u>		
<u>Total</u>	<u>Gum</u>	<u>Wood</u>	<u>Total</u>	<u>Gum</u>	<u>Wood</u>

Table 1a - SUPPLY AND DISTRIBUTION

U. S. Carryover						
October ^{1/}	165,326	123,460	41,866	258,443	233,151	25,292
Production ^{2/}	121,099	60,580	60,519	118,119	59,205	58,914
Imports	1,926	1,926	---	2,749	2,749	---
Available Supply	288,351	185,966	102,385	379,311	295,105	84,206
Less Carryover						
December 31 ^{3/}	150,098	105,517	44,581	249,092	217,720	31,372
Appar. Total						
Consumption	138,253	80,449	57,804	130,219	77,385	52,834
Less Exports	19,367	11,651	7,716	10,081	6,396	3,685
Appar. U. S.						
Consumption	118,886	68,798	50,088	120,138	70,989	49,149

TABLE 2a - CARRYOVER (Stocks)

U. S. Carryover						
October 1	165,326	123,460	41,866	258,443	233,151	25,292
U. S. Carryover						
December 31	150,098	105,517	44,581	249,092	217,720	31,372
Increase	---	---	2,715	---	---	6,000
Decrease	15,228	17,943	---	9,351	15,431	---

^{1/} From Table 4a, 1945-46 Semi-Annual Naval Stores Report.

^{2/} Table 5a.

^{3/} Table 4a.

SUMMARY OF ROSIN

SUPPLY, DISTRIBUTION AND CARRYOVER (Drums - 520 lbs. net)
(By naval stores crop years, beginning April 1 and ending March 31)

<u>1945-46</u>			<u>1944-45</u>		
<u>3 mos. (Oct. - Dec.)</u>			<u>3 mos. (Oct. - Dec.)</u>		
<u>Total</u>	<u>Gum</u>	<u>Wood</u>	<u>Total</u>	<u>Gum</u>	<u>Wood</u>

TABLE 1b - SUPPLY AND DISTRIBUTION

U. S. Carry over	---					
October 1 ^{1/}	473,146	325,937	147,209	661,594	526,639	134,955
Production ^{2/}	375,501	186,057	189,441	347,559	181,808	165,751
Imports	469	469	---	3,603	3,603	---
Available Supply	849,116	512,463	336,653	1,012,756	712,050	300,706
Less Carryover						
December 31 ^{3/}	479,890	310,545	169,345	572,839	442,394	130,445
Appar. Total						
Consumption	369,226	201,918	167,308	439,917	269,656	170,261
Less Exports	56,813	28,186	28,627	42,893	23,815	19,078
Appar. U. S.						
Consumption	312,413	173,732	138,681	397,024	245,841	151,183

TABLE 2b - CARRYOVER (Stocks)

U. S. Carryover						
October 1	473,146	325,937	147,209	661,594	526,639	134,955
U. S. Carryover						
December 31	479,890	310,545	169,345	572,839	442,394	130,445
Increase	6,744	---	22,136	---	---	---
Decrease	---	15,392	---	88,755	84,245	4,510

^{1/} From Table 4b, 1945-46 Semi-Annual Naval Stores Report.

^{2/} Table 5b. Includes reclaimed rosin.

^{3/} Table 4b.

DETAILS AND SUMMARY OF TURPENTINE CARRYOVER (Bbls. - 50 gals.)

	<u>1945</u> <u>December 31</u>			<u>1944</u> <u>December 31</u>		
	<u>Total</u>	<u>Gum</u>	<u>Wood</u>	<u>Total</u>	<u>Gum</u>	<u>Wood</u>
<u>TABLE 3a - DETAILS OF TURPENTINE CARRYOVER (Stocks)</u>						
<u>Production Points</u> ^{1/}						
Gum Stills ^{2/}	22,796	22,796	---	26,760	26,760	---
Wood Plants						
Steam Dist.	9,284	---	9,284	9,358	---	9,358
Sulphate	6,650	---	6,650	4,958	---	4,958
Dest. Dist.	273	---	273	400	---	400
Total	39,003	22,796	16,207	41,476	26,760	14,716
<u>Sou. Concent. Points</u> ^{1/}	50,917	50,917	---	162,824	162,824	---
<u>Distribution Points</u>						
Eastern	10,382	7,199	3,183	7,394	5,116	2,278
Central	20,897	15,034	5,863	18,014	13,825	4,189
Western	4,511	3,191	1,320	2,889	2,122	767
Total ^{3/}	35,790	25,424	10,366	28,297	21,063	7,234
<u>Industrial Plants</u> ^{4/}	24,388	6,380	18,008	16,495	7,073	9,422

TABLE 4a - SUMMARY OF TURPENTINE CARRYOVER (Stocks)

Production Points	39,003	22,796	16,207	41,476	26,760	14,716
Sou. Concent. Points	50,917	50,917	---	162,824	162,824	---
Distribution Points	35,790	25,424	10,366	28,297	21,063	7,234
Industrial Plants	24,388	6,380	18,008	16,495	7,073	9,422
Total in U. S.	150,098	105,517	44,581	249,092	217,720	31,372

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- ^{1/} Irrespective of ownership. Some of the turpentine may have been sold and may be awaiting shipment.
- ^{2/} Compiled from reports by producers and factors.
- ^{3/} Compiled from reports of individual distributors.
- ^{4/} Compiled from reports of individual consumers.

DETAILS AND SUMMARY OF ROSIN CARRYOVER (Drums - 520 lbs. net)

	<u>1945</u> <u>December 31</u>			<u>1944</u> <u>December 31</u>		
	<u>Total</u>	<u>Gum</u>	<u>Wood</u>	<u>Total</u>	<u>Gum</u>	<u>Wood</u>
TABLE 3b - DETAILS OF ROSIN CARRYOVER (Stocks)						
<u>Production Points</u> ^{1/}						
Gum Still ^{2/}	101,341	101,341	---	93,346	93,346	---
Wood Plants						
Steam Dist. ^{3/}	75,348	---	75,348	57,613	---	57,613
Sulphate	---	---	---	---	---	---
Dest. Dist.	---	---	---	---	---	---
Total	176,689	101,341	75,348	150,959	93,346	57,613
<u>Sou. Concent. Points</u> ^{1/}	26,979	26,979	---	98,968	98,968	---
<u>Distribution Points</u>						
Eastern	8,682	5,279	3,403	6,620	4,471	2,149
Central	6,622	3,341	3,281	8,030	5,933	2,097
Western	487	328	159	664	293	371
Total ^{4/}	15,791	8,948	6,843	15,314	10,727	4,587
<u>Industrial Plants</u> ^{5/}	260,431	173,277	87,154	307,598	239,353	68,245

TABLE 4b - SUMMARY OF ROSIN CARRYOVER (Stocks)

Production Points	176,689	101,341	75,348	150,959	93,346	57,613
Sou. Concent. Points	26,979	26,979	---	98,968	98,968	---
Distribution Points	15,791	8,948	6,843	15,314	10,727	4,587
Industrial Plants	260,431	173,277	87,154	307,598	239,353	68,245
Total in U. S.	479,890	310,545	169,345	572,839	442,394	130,445

- 1/ Irrespective of ownership. Some of the rosin may have been sold and may be awaiting shipment.
- 2/ Compiled from reports by producers and factors. Includes reclaimed rosin.
- 3/ Does not include by-products resulting from making paler grades from FF wood rosin.
- 4/ Compiled from reports of individual distributors.
- 5/ Compiled from reports of individual consumers.

DETAILS OF PRODUCTION

(By naval stores crop years, beginning April 1 and ending March 31)

1945-46 1944-45
3 mos. (Oct. - Dec.) 3 mos. (Oct. - Dec.)

Total Gum Wood Total Gum Wood

TABLE 5a - PRODUCTION OF TURPENTINE (Bbls. - 50 gals.)

Gum	60,580	60,580	---	59,205	59,205	---
Wood						
Steam Dist.	32,774	---	32,774	30,746	---	30,746
Sulphate	26,754	---	26,754	26,101	---	26,101
Dest. Dist.	991	---	991	2,067	---	2,067
Total	<u>121,099</u>	<u>60,580</u>	<u>60,519</u>	<u>118,119</u>	<u>59,205</u>	<u>58,914</u>

TABLE 5b - PRODUCTION OF ROSIN (Drums 520 lbs. net)

Gum	184,776	184,776	---	179,541	179,541	---
Reclaimed Gum	1,281	1,281	---	2,267	2,267	---
Wood						
Steam Dist.	189,444	---	189,444	165,751	---	165,751
Sulphate	---	---	---	---	---	---
Dest. Dist.	---	---	---	---	---	---
Total	<u>375,501</u>	<u>186,057</u>	<u>189,444</u>	<u>347,559</u>	<u>181,808</u>	<u>165,751</u>

TABLE 5c - PRODUCTION OF BLACK LIQUOR SOAP AND TALL OIL^{1/}

1945-46 1944-45
3 mos. (Oct. - Dec.) 3 mos. (Oct. - Dec.)

Black Liquor Soap		
Reported as produced	50,487 tons	47,347 tons
Black Liquor Soap		
Reported as acidified	49,183 tons	41,294 tons
To produce according to reports		
Crude Tall Oil	23,813 tons	20,519 tons

^{1/} See foreword for definition.

TABLE 6 - PRODUCTION OF GUM TURPENTINE BY STATES^{1/}

	<u>1945-46</u>		<u>1944-45</u>	
	<u>3 mos. (Oct. - Dec.)</u>		<u>3 mos. (Oct. - Dec.)</u>	
	<u>Barrels</u>	<u>Percentage</u>	<u>Barrels</u>	<u>Percentage</u>
South Carolina	415	0.69	594	1.00
Georgia	42,686	70.46	39,493	66.71
Florida	12,625	20.84	13,884	23.45
Alabama	3,699	6.11	4,121	6.96
Mississippi	910	1.50	940	1.59
Louisiana	245	0.40	173	0.29
Total	60,580	100.00	59,205	100.00

TABLE 7 - MISCELLANEOUS NAVAL STORES (Bbls. - 50 gals.)

	<u>1945-46</u>	<u>1945</u>	<u>1944-45</u>	<u>1944</u>
	<u>3 mos. (Oct. - Dec.)</u>	<u>Dec. 31</u>	<u>3 mos. (Oct. - Dec.)</u>	<u>Dec. 31</u>
	<u>Production</u>	<u>Stocks</u>	<u>Production</u>	<u>Stocks</u>
Pine Oil	27,887	12,637	27,333	10,312
Pine Tar	18,911	3,121	20,520	1,213
Rosin Oil	2,904	2,631	6,656	3,065
Dipentene	4,916	2,063	5,184	3,895
Other Monocyclic Hydrocarbons	8,578	6,339	9,573	6,537

^{1/} A unit of naval stores consists of one 50-gallon barrel of turpentine and two and two-thirds drums (each 520 lbs. net) of rosin.

TABLE 8c - REPORTED CONSUMPTION OF TURPENTINE IN UNITED STATES (Bbls. - 50 gal.)
(By naval stores crop years, beginning April 1 and ending March 31)

	1945-46 3 mos. (Oct. - Dec.)			1944-45 3 mos. (Oct. - Dec.)		
	<u>Total</u>	<u>Gum</u> ^{1/}	<u>Wood</u> ^{1/}	<u>Total</u>	<u>Gum</u> ^{1/}	<u>Wood</u> ^{1/}
Abattoirs	0			0		
Adhesives & Plastics	52			74		
Asphaltic products	0			0		
Automobiles & wagons	29			37		
Chemicals & pharmaceuticals	27,647			32,909		
Ester gum & synthetic resins	4,593			4,346		
Foundries & foundry supplies	155			169		
Furniture	49			54		
Insecticides & disinfectants	4			8		
Linoleum & floor covering	12			11		
Matches	0			0		
Oils & greases	3			117		
Paint, varnish & lacquer	4,547			5,174		
Paper & paper size	0			0		
Printing ink	53			69		
Railroads & shipyards	1,753			2,397		
Rubber	52			196		
Shoe polish & shoe materials	3,135			3,135		
Soap	0			0		
Other industries	66			46		
Total industrial reported	42,150	8,200	33,950	48,772	12,702	36,070
Not accounted for ^{2/}	76,736	60,598	16,138	71,366	58,287	13,079
Apparent U. S. consumption ^{3/}	118,886	68,798	50,088	120,138	70,989	49,149

- ^{1/} Separation of gum and wood turpentine consumption will be limited for the present to the total reported.
- ^{2/} Principally unreported distribution of turpentine through retailers who sell in small quantities to ultimate consumers.
- ^{3/} From Table 1a, page 1.

TABLE 8b - REPORTED CONSUMPTION OF ROSIN IN UNITED STATES (Drums - 520 lbs. net)
(By naval stores crop years, beginning April and ending March 31)

	1945-46 3 mos. (Oct. - Dec.)			1944-45 3 mos. (Oct. - Dec.)		
	<u>Total</u>	<u>Gum^{1/}</u>	<u>Wood^{1/}</u>	<u>Total</u>	<u>Gum^{1/}</u>	<u>Wood^{1/}</u>
Abattoirs	113			301		
Adhesives & plastics	4,719			8,867		
Asphaltic products	162			448		
Automobiles & wagons	39			55		
Chemicals & pharmaceuticals	65,691			68,362		
Ester gum & synthetic resins	63,314			68,952		
Foundries & foundry supplies	3,276			2,923		
Furniture	0			2		
Insecticides & disinfectants	1,097			1,403		
Linoleum & floor covering	2,943			5,298		
Matches	286			265		
Oils & greases	5,605			11,384		
Paint, varnish & lacquer	24,757			36,288		
Paper & paper size	67,945			95,637		
Printing ink	2,010			4,873		
Railroads & shipyards	2,586			6,540		
Rubber	3,460			5,596		
Shoe polish & shoe materials	1,272			1,869		
Soap	30,394			82,705		
Other industries	900			1,055		
Total industrial	280,569	129,436	151,133	402,823	246,548	156,275
Not accounted for ^{2/}	31,844	44,296	-12,452	-5,799	-707	-5,092
Apparent U. S. consumption ^{3/}	312,413	173,732	138,681	397,024	245,841	151,183

- ^{1/} Separation of gum and wood rosin consumption will be limited for the present to the total reported.
- ^{2/} The discrepancy between the total industrial consumption reported and the apparent U. S. consumption is due partly to unreported industrial consumption and partly to failure of some consumers to distinguish between gum rosin, wood rosin, and modified or derived rosins in their reports.
- ^{3/} From Table 1b, page 2.

ADDENDA

Additional information pertaining to naval stores may be obtained as follows:

For periods prior to 1912, for monthly, quarterly and annual reports on imports and exports of turpentine and rosin, address: Foreign Trade Statistics, Bureau of the Census, Department of Commerce, Washington, D. C. Price ten cents per copy.

For biennial census of the production of turpentine and rosin, address: Bureau of the Census, Department of Commerce, Washington, D. C.

For information on the Naval Stores Conservation Program, write to the Regional Forester, U. S. Forest Service, Glenn Building, Atlanta 3, Georgia.

For information on the southern forest survey showing turpentine timber resources, address: Southern Forest Experiment Station, Box 7295, Midcity Station, New Orleans 19, Louisiana.

For information regarding the production, distribution, consumption and stocks of turpentine and rosin, address: Naval Stores Research Division, Bureau of Agricultural and Industrial Chemistry, 2100 Robert E. Lee Boulevard, New Orleans 19, Louisiana.